

Getting Renewables in the Battle Space

One Small Tactical Example

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On behalf of the Informal COP Power Node IPT

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- Hear a limited perspective on how technologies get to the battlespace
- Introduction to different organizations working on similar work
- Gain perspective from the folks around you listening to this brief
- Obtain a list of acronyms and lexicon to confuse/impress your friends
- Leave with an awesome respect for those who bear the burden of war

- Presentation Deliverables
- Project Overview:
 - RDECOM FAST Project 09-03: “Power Film Thin Film Voltaic Shade” for Combat Outposts or Stability Operations Relief Node
- Testing
- Lessons Learned
- Questions
- Contacts



Purpose of the demonstration

- Update Commanders and organizations on a small project involving the employment of a renewable energy device for combat operations or stability operations.
- Project Goals:
 - Reduce fuel demand in battlespace
 - Improve Force Protection
 - Reduce Soldier loads
 - Enable Stability Operations
 - Further develop core DoD material developer team and expertise on renewables
 - Assist Program Managers in executing the Army Modernization Strategy
 - Influence leaders and encourage teaming
- **Focus: One of the furthest points of energy use in the battlespace**





- **Roots:** SETAF Deployable HQ Energy Demand Reduction Effort-MAJ Mike Fleming-FAST SETAF 2008
- Addition of SOUTHCOM/EUCOM interest in renewables to facilitate Stability Operations and remote low density enduring power for HA/DR support.
- **Bottom Line:** COCOM interest for Stability Operations, Need warfighter input for tactical value

One Potential Solution



Why this one?

- **Phase 1: Obtain a Safety Confirmation** on a thin film product and demonstrate a deployable renewable energy module in CONUS and OCONUS.
 - Ft Belvoir- APR
 - EUCOM –JUL 09
- **Phase 2: Conduct power assessments** on Combat Outpost Power Requirements and Stability Operations Relief Node.
 - CONUS: JUL-SEP
 - APG- DTC & NTC-New COP site
 - OCONUS (Site TBD): JUL-OCT
 - Leverage FAST/OSD-PSTF?
- **Phase 3: Conduct an informal Analysis of Alternatives** that supports PM Modernization Strategy (Unfunded/Not Scheduled).

* Reference draft FAST project summary sheet



Multiple RDECOM Players:



- RDECOM: Manage project and demos
- PM MEP: Conduct Power Assessments
- ACOE: Analyze deployable energy efficient structures
- Service/COCOM: Formalize requirements
- OSD: Provide guidance, contribute lessons learned/data acquisition from Net Zero JCTD
- ATEC/DTC: Manage Test & Evaluation

Safety Confirmation Plan

ID	Task Name	Start	Finish
1	Military Solar Power Shade	Tue 3/31/09	Tue 6/23/09
2	Planning	Tue 3/31/09	Mon 4/20/09
3	Test Plan	Tue 3/31/09	Mon 4/20/09
4	OPSEC	Mon 4/13/09	Mon 4/13/09
5	Environmental	Mon 4/13/09	Mon 4/13/09
6	Risk Assessment	Mon 4/13/09	Tue 4/14/09
7	ATIRS	Wed 4/8/09	Wed 4/15/09
8	Execution	Mon 5/4/09	Mon 5/11/09
9	Initial Inspection/NET	Mon 5/4/09	Mon 5/4/09
10	Safety	Mon 5/4/09	Mon 5/4/09
11	Secured Cargo Vibration	Tue 5/5/09	Tue 5/5/09
12	HFE	Wed 5/6/09	Thu 5/7/09
13	Blowing Rain	Fri 5/8/09	Fri 5/8/09
14	Final Inspection	Mon 5/11/09	Mon 5/11/09
15	Reporting	Wed 5/6/09	Fri 5/15/09
16	HFE Lab Report	Mon 5/11/09	Fri 5/15/09
17	Vibration Lab Report	Wed 5/6/09	Wed 5/13/09
18	Recommendation for DTC Safety Confirmation	Mon 5/11/09	Mon 5/25/09
19	Final Report	Tue 5/12/09	Tue 6/23/09

- **Project success driven by a high performance team- not the briefer!**
- Renewables are a low energy density solution
- Education & energy reduction are the first steps
- DoD teams are partnering to make these efforts successful
- Broad area announcements are the invite to industry
- Things to consider:
 - Address government requirements and questions
 - Have patience
- Four things in a government project:
 - Who has oversight of the funds/effort?
 - Who owns the requirement?
 - Who is the government technical expert?
 - Who will the technology transition to and ultimately be procured by?
- Realities: Time and connectivity and resources to get things done

- General Information
 - <https://www.fbo.gov/>
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